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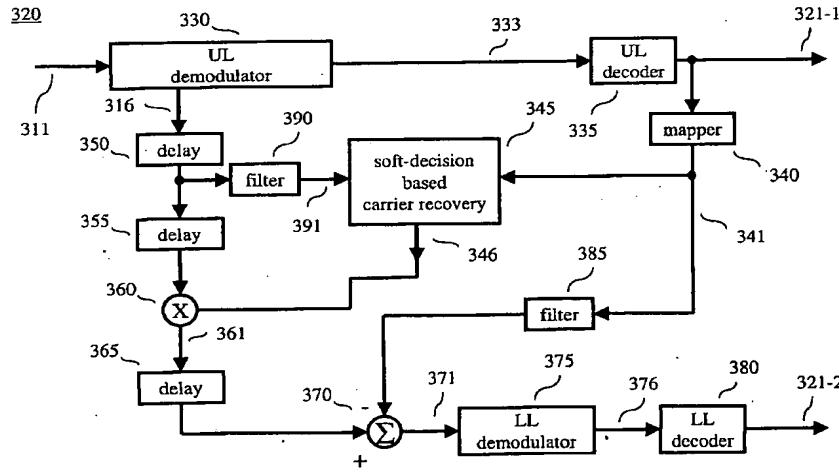
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**(54) Title: METHOD AND APPARATUS FOR CARRIER RECOVERY IN A COMMUNICATIONS SYSTEM**



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**(57) Abstract:** A satellite communications system comprises a transmitter, a satellite transponder and a receiver. The transmitter transmits an uplink layered modulation signal having an upper layer and a lower layer to the satellite transponder, which broadcasts the layered modulation signal downlink to one, or more, receivers. The receiver receives the layered modulation signal (the received signal) and performs demodulation and decoding of the lower layer signal component thereof by using a recovered carrier to derotate the received signal, wherein the recovered carrier is developed by a carrier recovery process driven by soft decisions with respect to the upper layer signal component of the received signal.